

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

Title V (PROPOSED) No. V-99-028
MARATHON ASHLAND PETROLEUM (CATLETTSBURG REFINING LLC - MARINE REPAIR
TERMINAL

May 30, 2000
STUART ECTON, B.S. CHEMICAL ENGINEERING/ REVIEWER
Plant I.D. # 103-0340-0016
AFS Plant ID# 21-019-00016
Application Log # F950

SOURCE DESCRIPTION:

The Marathon Ashland Petroleum Marine Repair Terminal is comprised of:

- a) Truck Unloading station (Lube Oil)
- b) Truck Loading station * (Heavy Oil, Light Oil and Styrene)
- c) Seven Black Fixed Roof Storage Tanks, three of which are oil water separators
- d) One Internal Flotation Roof Storage Tank
- e) Barge Painting
- f) Hot Water Barge Cargo area Cleaning
- g) Three Boilers: Two 10.2mmBtu/hr and one 12.5mmBTU/hr
- h) Various pipeline equipment: pumps, valves and flanges.
- i) Barge Loading of Light Rerun and Heavy Rerun.

*- Not in operation as of the date of the last inspection.

COMMENTS AND RESPONSES:

There were no comments received from the public. However, the source made several comments that are summarized and responded to here. The comment appears in italics.

Comment I:

Page 2
Section B
(EP 01, 02, 03 – Boiler # 1, 2, 3)

*General statement addressing construction or modification date of boilers should be corrected to read
“Boiler # 1 and # 2 constructed 1952, Boiler # 3 constructed 1973.”*

Response to Comment I:

The permit has been corrected to reflect the original build dates for boilers # 1 and # 2. However, the applicable regulation identified by the source indicates that these boilers were modified after 1973 thereby making them subject to 59:015.

Comment II:

Page 3

Section B

(EP 01, 02, 03 – Boiler # 1, 2, 3)&(EP 09, 10, 11 – Tanks 5, 6, 7)

4. Special Monitoring Requirements:

Providing daily heat and sulfur content of fuel oil burned is not warranted given the batch type storage provided by Tanks 5, 6, & 7. Tanks 6 & 7 are distillate tanks and fuel supplier certification will be used to comply with monitoring requirements. Tank 5 can be filled from tanks 1, 2, or 3 at a rate meeting boiler fuel consumption. Under normal operations Tank 2 receives product from Tank 1 at intervals approaching 3 to 4 weeks (Tank 3 is a “back up” storage option). Tank 2 or 3 in return supplies Tank 5. By sampling Tank 2 (or Tank 3) after each receipt from Tank 1, Tank 5’s heat and sulfur content can be confirmed without the burdensome daily sample/analysis requirement.

Response to Comment II:

The Division agrees that, in this case, daily monitoring of the amount of fuel oil burned is not necessary to demonstrate compliance with the applicable regulation (401 KAR 59:015). In response to the permittee’s comment the requirement for monitoring the amount of fuel oil burned has been relaxed to a monthly basis. As originally stated in the draft, the permittee may use a fuel supplier certification to indicate heat and sulfur content.

Comment III:

Page 4

Section B

(EP 04 – Dissolved Air Floatation Units)

Review of 401 KAR 59:095 & 401 KAR 61:045, the former Ashland Petroleum Company’s 1989 DAF Registration Application, and subsequent Kentucky Division for Air Quality’s written “no permit required” notification, indicates the source should not be considered an “affected facility.” The DAF system does not recover > than 200 gallons/day petroleum material nor does the RVP [100°F] of material recovered exceed 0.5 psia. If the DAF system is not considered an “affected facility”, no floating roof or its equivalent is required. NOTE: The potential to emit for EP 04-OWS is only 530 lbs/yr of VOC (an insignificant source).

Response to Comment III:

The Division agrees with the comment and the permit has been revised as requested. The letter dated September 9, 1999, containing these comments, shall serve as certification that this point is insignificant as defined by Regulation 401 KAR 50:035.

Comment IV:

*Page 7
Section B
(EP 05, 06, 07 – Tank/OWS 1, 2, 3)
6. Specific Reporting Requirements:*

Corrected to read: “The permittee shall demonstrate the Reid vapor pressure or True Vapor Pressure of the hydrocarbon handled by these vessels upon request of Division personnel.”

NOTE: Tanks 1, 2, & 3 are listed on the DRAFT permit as both storage vessels and OWS, therefore, the recording of RVP or TVP is dependent on the specific/applicable regulation.

Response to Comment IV:

The permittee is correct about the storage tank regulations and the OWS regulations referencing True Vapor Pressure and Reid Vapor Pressure, respectively. The permit has been corrected to reflect the differentiation between True and Reid Vapor Pressure as referenced by the aforementioned regulations.

Comment V:

*Page 8
Section B
(EP 09 – Tank 5)
Description:*

Corrected to read: “09 (Tank 5): 9,996 gallons (38m³) Heavy Rerun: Black horizontal storage tank constructed 1998.”

NOTE: Appears inadvertently listed as “Light Rerun” on DRAFT permit.

Response to Comment V:

The permit has been revised pursuant to the permittee’s request.

Comment VI:

*Page 10
Section B
(EP 08 – Tank 4)
Description:*

Correction requested: Under Description “Light rerun, Maximum TVP: 6.96 psia” is listed. 401 KAR 59:485 (40 CFR 60 Subpart Kb incorporated into permit as attachment A) does not identify the maximum TVP for applicable tanks at 6.96 psia but 11.1 psia. Any description for EP 08 should reflect 11.1 psia and not 6.96 psia.

Response to Comment VI:

The listing of the True Vapor Pressure was intended to reflect information in the application that indicated this physical property was 6.96 psia. It was not intended as a limit but the Division agrees that it could be construed as such. Therefore, in response to the comment, the reference to “Maximum TVP: 6.96psia” has been deleted from the permit.

Also, 59:485 has been re-codified as 60:005.

Comment VII:

*Page 12
Section B
(EP – Barge Loading)
State Origin Requirements:*

Corrected to read: “The following liquids are authorized to be barge loaded.”

NOTE: Listed on DRAFT as “tanker truck loaded.”

Response to Comment VII:

This was an oversight by the Division and has been corrected pursuant to the comment.

Comment VIII:

*Page 16
Section B
(EP 15 – Barge Cleaning)
Operating Limitations:*

Review of U.S. and State EPA Regulations and discussions with several vapor control system

Comment VIII Continued:

manufacturers indicate only Texas and Louisiana mandate vapor control on marine vessel degassing operations. Both states set emission capture and control at 90% overall efficiency.

As reported in Marathon Ashland Petroleum LLC's December 12, 1996 and December 22 & 29 Title V permit applications, emissions from degassing distillate and other low vapor pressure products are not a significant VOC or HAP source. As a reference, 40 CFR 63, Subpart Y (National Emission Standards for Marine Tank Vessel Loading Operations) only applies to gasoline, crude oil, and other products with a TVP greater than or equal to 1.5 psia at standard conditions and then only at a certain annual throughput or emission level.

Marathon Ashland Petroleum LLC suggests vapor collection and control be installed for the degassing of barges last carrying products with a TVP greater than or equal to 1.5 psia at standard conditions. Overall control efficiency should be set at 90%.

Response to Comment VIII:

The Division agrees that an overall control efficiency of 90% is sufficient to comply with Regulation 401 KAR 50:012. However, the permittee's comment that 40 CFR 63 Subpart Y does not apply to loading liquids with a vapor pressure of 1.5 psia or less is irrelevant because most liquids are loaded at ambient temperatures. In the case of barge cleaning, where heated water or steam is used to degass marine vessels, the temperature of the contents can theoretically reach as high as 212°F. At this temperature the vapor pressure and corresponding emissions are higher. It is also important to take into consideration that this area has, in the past, been designated an ozone non-attainment area and that the degassing operation takes place in a river valley where dispersion of emissions can be hindered by terrain and weather conditions. It is, therefore, the opinion of the Division that controls be employed whenever any barge or other marine vessel is cleaned.

Comment IX:

Page 17

Section B

(EP 15 – Barge Cleaning)

9. Compliance Schedule:

Marine vessel degassing operations are currently addressed via the United States Coast Guard's Navigation & Vessel Inspection Circular No. 1-96: Safety Standards for the Design and Operation of a Marine Vapor Control System (VCS) at Tank Barge Cleaning Facilities (discussions with several vapor control system manufacturers indicate this guideline will be published in the Federal Register within the next nine months, thereby becoming a regulation). As reference, the Coast Guard currently regulates vapor control systems installed at a marine vessel loading facilities (46 CFR Part 39). Under these regulations, a facility's vapor control system must meet their safety design standards and the design/construction/operation must be approved by a Coast Guard authorized third party Certifying Entity prior to the system's start-up. Their safety certification is in addition to the U.S. or

Comment IX Continued:

State EPA vapor control criteria.

The 18-month compliance schedule listed under milestone dates: does appear adequate given the relative few marine vessel degassing control units in operation (lacking a broad-based safety or operation history) in the U.S.A., the major safety concerns with vessel degassing vapor control operations/units, additional lead time required by manufacturer to build system (specialty; items not mass produced and site specific), additional design and production time required when working with a third-party Certifying Entity, site location restrictions itself [adequate space-separation of MRT activities, etc.], and start-up/shake-down period required prior to conductivity compliance demonstration.

Time Line Overview

<i>8 months</i>	<i>Design submittal period</i>
<i>3 months</i>	<i>U.S. & State EPA plan approval (could require much longer period)</i>
<i>8 months</i>	<i>Manufacture & delivery of unit and ancillary equipment</i>
<i>6 months</i>	<i>Site preparation and construction</i>
<i>2 months</i>	<i>U.S. Coast Guard and third-party certifying entity approval</i>
<i>6 months</i>	<i>Allowed start-up/shake-out period prior to compliance demonstration</i>

The second phase of the compliance milestone dates should be activated upon the approval of the “vapor control plan” by the Division and not upon issuance of the Title V permit. NOTE: The unit can not be ordered from the manufacturer until plan approved.

If the Division fails to approve the plan in a timely fashion (for “whatever” reason), the “compliance permit clock “ is still ticking on Marathon Ashland Petroleum LLC. Marathon may not meet the compliance milestone through no fault of its own.

Response to Comment IX:

The Division believes that the above listed time table is unnecessarily long. It would allow almost three years to install and operate control equipment that should already be in place pursuant to Regulation 50:012. However, it was the Division’s responsibility to notify the permittee that RACT is required for this source. Now that the Division has notified Marathon Ashland of these requirements, it is incumbent upon them to expeditiously install and make operational the controls.

In response to the comment, however, the Division is willing to be flexible in allowing sufficient time to get the required controls up and running. Therefore, the wording of the permit has been modified to allow at least two years to install and operate the control system.

In addition, the permittee makes an excellent point in the last paragraph to the above comment. Through no fault of its own, the source could experience compliance problems if the Division is delinquent in approving the design system that is proposed. In response to the comment, the Division has changed the requirement to start the clock at the time of Division approval of the control system

Response to Comment IX Continued:

instead of at the time of permit issuance. However, the comments about the Coast Guard and a third party Certifying Entity, are not relevant to this permit because it is Marathon Ashland's separate responsibility to comply with those requirements and the Division believes that two years is plenty of time to design, install and operate controls of this nature.

Comment X:

Page 20

Section B

(EP 17 – Pipeline Equipment)

Description:

The fugitive emission pipeline equipment estimate (pumps, valves, flanges) provided documentation of their minimal emission impact. Suggest the pipeline equipment be listed under the insignificant activity section (no applicable regulation was cited by the Division for this source). In that the number of pumps, valves, flanges may change during a permit's term, Marathon Ashland Petroleum LLC suggests it identify the pipeline equipment for each permit renewal application.

Response to Comment X:

The Division agrees with the comment and the permit has been revised as requested. The letter dated September 9, 1999, containing these comments, shall serve as certification that this point is insignificant as defined by Regulation 401 KAR 50:035.

Comment XI:

Page 22

Section C

(Insignificant Activities)

Remove the second sentence of the paragraph. Since there are no applicable regulations identified for these activities, no monitoring should be necessary. Suggest identify these activities for each permit renewal application.

Response to Comment XI:

The Division does not see the necessity of removing the last sentence of the referenced paragraph since there are no monitoring requirements for these activities. However, it is possible that an insignificant activity listed here in the future will be subject to a monitoring requirement and the sentence will, therefore, remain.